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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,098	05/30/2001	Roderick Pettit	10191/1771	1093
26646	7590	07/02/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			SIANGCHIN, KEVIN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,098

Applicant(s)

PETTIT, RODERICK

Examiner

Kevin Siangchin

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Detailed Action

Amendments

1. The amendment filed March 13, 2001 has been acknowledged and made of record. Claims 1-6 have been cancelled and Claims 7-13 added, accordingly.

Claims

Objections

2. New claims 8 and 9 are objected to because of the following informalities. While the notion of *user query*, as used in new claims 8 and 9, is understood within the context of the Applicant's specification, this terminology is unnecessarily awkward. In particular, the word *query* is generally taken to mean question. Within the context of the Applicant's claimed invention, the user does not question or solicit information from the device in any way. Rather, the user requests that the device operate in one of the plurality of available modes. Therefore, replacing the word *query* with a word such as *request* would mediate potential confusion. In order to maintain consistency throughout the disclosure, it is further suggested that corresponding changes be made to the Applicant's specification to reflect any change made to the claim language. For the remaining portions of this document, user queries will be treated and referred to as user requests. Appropriate correction is required.

Rejections Under 35 U.S.C. § 102(b)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito (U.S. Patent 5,995,643).

5. *The following is in regard to Claim 7.* Saito discloses an image input system based on comparison (or, using Saito's nomenclature, collation) of biometric (i.e. finger) data. In this system, at least one of several operating modes (i.e. set of different operations [e.g. Saito column 13, lines 6-10], operating directories [e.g. Saito Fig. 17 and column 13, lines 11-17], or jobs [e.g. Saito Fig. 23 and column 14, lines 31-37 and column 15, lines 21-24]) are selectable by the user. The system of Saito includes the following:

- (7.a.) A biometry data detector (e.g. pattern input section 410 depicted in Saito Fig. 7) for detecting biometry data of a user and providing a biometry signal (e.g. finger projection signal $V(i)$) indicative thereof. See Saito column 9, lines 48-50.
 - (7.b.) A biometry profile (e.g. registration section 413 depicted in Saito Figs. 12-13) memory for storing at least one reference pattern (e.g. dictionary signal(s), $Vd(i)$). See Saito Figs. 12-13 and the corresponding discussion in column 10, lines 60-67 to column 11, lines 1-16.
 - (7.c.) An operating mode selector for activating one of at least two predefined operating modes (see the discussion above and, for example, Saito Figs. 16 and 23). The selection of operating modes is detailed throughout and illustrated, for example, in Figs. 16 and 23. Therefore, components of Saito's system that implement this described selection procedure(s) can be construed as constituting an operating mode selector.
- In the system of Saito, the selection of operating modes is a function of an agreement between the biometry signal and the reference pattern. Specifically, selection is made based first on the authentication of the user (e.g. steps S206-S207 of Saito Fig. 13 or step S303 of Saito Fig. 14). As can be seen in Saito Fig. 25, step S332 and Fig. 17, for example, selection is further based on the matching of input signal $V(i)$ corresponding to a specific user finger with the corresponding dictionary signal $Vd(i)$.

It has thus been shown the system of Saito represents a device that selecting operating modes in accordance with the device proposed in claim 7. Therefore, the teachings of Saito, with regard to the aforementioned image input system, anticipate the device set forth in claim 7.

It has thus been shown the system of Saito represents a device that selecting operating modes in accordance with the device proposed in claim 7. Therefore, the teachings of Saito, with regard to the aforementioned image input system, anticipate the device set forth in claim 7.

6. *The following is in regard to Claim 8.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 7. In the system of Saito, user requests (i.e. requests to perform certain jobs or write to certain directories – see Saito Figs. 23 and 16, respectively) are provided in each of the operating modes. Note steps S312'-S313' in Saito Fig. 19 and steps S332-S333 in Saito Fig. 25, in conjunction with Figs. 16 and 23, respectively. In a manner similar to the Applicant's disclosed device, these requests are embodied by the input biometric data, as indicated in Saito Figs. 16 and 23. Furthermore, the response to this request is a function of (in other words, based on) the agreement between the biometry signal (i.e. $V(i)$) and the reference pattern (i.e. $Vd(i)$). For example, in the embodiment depicted in Saito Figs. 23-25, response to any of the requests (e.g. those depicted in Saito Fig. 23) first depends on the authentication of the user (e.g. as in steps S206-S207 of Saito Fig. 13 or step S303 of Saito Fig. 14 and implicit to obtaining the user ID in step S332 of Fig. 25) and, next, on the agreement of the input biometric signal with the reference dictionary signal associated with the finger corresponding to the requested job (implicit to obtaining information indicating finger used and the input job in step S332 of Saito Fig. 25). It has thus been shown the system of Saito represents a device that selecting operating modes in accordance with the device proposed in claim 8. Therefore, the teachings of Saito, with regard to the aforementioned image input system, anticipate the device set forth in claim 8.

7. *The following is in regard to Claim 9.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 8. Also discussed above, an operating mode is selected, among the plurality of operating modes available in Saito's system, and activated depending on a predetermined variable, namely E (Saito column 11, lines 37-63), indicating the agreement of the input biometric signal $V(i)$ with the reference signal $Vd(i)$. Since the operating mode selection is made according to a user request (see the discussion above relating to claim 8), user requests in the system of Saito also depend on this predetermined variable. It has thus been shown the system of Saito represents a device that selecting operating modes in accordance with the device proposed in claim 9. Therefore, the teachings of Saito, with regard to the aforementioned image input system, anticipate the device set forth in claim 9.

8. *The following is in regard to Claim 10.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 9. Following from the preceding discussion, operating mode selection is predicated (at least, in part) upon the reference dictionary signal $Vd(i)$. Furthermore, user requests are fulfilled by determining the operating mode corresponding to the input biometric signal $V(i)$ (e.g. Saito Fig. 25 step 332). That determination is based on the relationship between the matched reference signal and operating modes for each of the systems users. This relationship is illustrated, for example, in Fig. 24. In this way, the responses to user requests also depend on the matching reference signal. It has thus been shown the system of Saito represents a device that selecting operating modes in accordance with the device proposed in claim 10. Therefore, the teachings of Saito, with regard to the aforementioned image input system, anticipate the device set forth in claim 10.

Rejections Under 35 U.S.C. § 103(a)

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Pu et al. (U.S. Patent 5,933,515)

11. *The following is in regard to Claim 11.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 9. It was also shown above that, in the system of Saito, the activation of any one of the operation modes depends on authentication of the user, which itself depends on the agreement of at least one reference dictionary signal with the input biometric signal. While this implies that Saito's operation mode selection (and user request fulfillment) depends on *exactly one* agreement between the input biometric signal and at least one reference pattern, it does not indicate that the operation mode selection (and user request fulfillment) depend on the predetermined variable of how often the biometry signal agrees with the reference pattern.

12. Pu et al. disclose an identification system, wherein identification is carried out by using input biometric information of human body parts (e.g. fingerprints) to form sequences, which are then compared with stored reference biometric information (e.g. template database) and stored sequence codes to determine whether the input sequences match the stored reference sequences (Pu et al. Abstract). In particular, Pu et al. describes using input fingerprints as a “finger print Morse Code” formed by removing and placing the user's fingerprint on the input device for a plurality of times with different duration (Pu et al. column 5, lines 48-57). In this manner, authentication, according to Pu et al.'s disclosed identification system, depends on a how often the input fingerprint(s) agree with the stored reference fingerprints.

13. Pu et al. and Saito are combinable because they are analogous art. In particular, both Pu et al. and Saito disclose systems that authenticate user identity by the comparison of at least one source of biometric data with a stored set of reference biometric data. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the applicant's claimed invention, to extend or modify the system of Saito in at least one of the following ways:

(11.a.) Modify the system of Saito such that user authentication (e.g. Saito Fig. 14, step 303) depends on not just matching of individual input biometric data with reference biometric data, but the matching of “Morse Code-like” sequences of input biometric data with stored reference sequences, in a manner analogous to the that which is described by Pu et al.

(11.b.) Extend the system of Saito so that operation mode selection is based not only on the biometric data of individual fingers, but on “Morse Code-like” sequences, such as those discussed in Pu et al., formed by combinations of biometric data obtained from the user's fingers.

14. The motivation and/or suggestion to perform modification (11.a) would have been to “significantly increase the possibility of positive identification and [provide] additional security against unauthorized use” of the thusly system (Pu et al. column 2, lines 29-33). One would have been similarly motivated to extend the system of Saito according to (11.b) above. Furthermore, by attributing more operating modes to sequences of finger biometric data, modification (11.b) clearly extends the functionality of the operation mode selection of Saito's system, since

the number of operating modes available to the user would no longer be constrained to the number of fingers he/she has (hopefully, ten). Performing either of modifications (11.a) or (11.b) would yield a system, in accordance with claim 9, such that operating mode selection (and user request fulfillment) depends on a predetermined variable of how often the biometry signal agrees with the reference signal. Such a system would conform to that which is set forth in claim 11.

15. *The following is in regard to Claim 12.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 9. Saito does not, however, show or suggest the operation mode selection (and user request fulfillment) depending on the predetermined variable of a time during which (i.e. duration) the biometry signal agrees with the reference signal.

16. As mentioned earlier, the fingerprint Morse Code taught by Pu et al. is formed by removing and placing the user's fingerprint on the input device for a plurality of times with different *duration* (Pu et al. column 5, lines 48-57). That is, these fingerprint Morse Codes depend on a predetermined variable of a time during which (i.e. duration) the biometry signal agrees with the reference signal. Following the discussion above relating to claim 11, modifications (11.a) and/or (11.b) would yield a system, in accordance with claim 9, such that operating mode selection (and user request fulfillment) depends on a predetermined variable of a time during which (i.e. duration) the biometry signal agrees with the reference signal. Such a system would conform to that which is set forth in claim 12.

17. *The following is in regard to Claim 13.* As shown above, Saito discloses a device that conforms to that which is set forth in claim 9. Saito does not, however, show or suggest the operation mode selection (and user request fulfillment) depending on the predetermined variable of a sequence in which the biometry signal agrees with the reference signal.

18. As mentioned above, Pu et al. disclose an identification system, wherein identification is carried out by using input biometric information of human body parts (e.g. fingerprints) to form sequences, which are then compared with stored reference biometric information (e.g. template database) and stored sequence codes to determine whether the input sequences match the stored reference sequences. See, for example, Pu et al. Abstract, column 2 (lines 4-5, 14-21, 25-28, 38-41), column 4 (lines 15-32) and column 5 (lines 24-55). Clearly, user authentication, according to the teachings of Pu et al., depends on the predetermined variable of a sequence in which the biometry signal agrees with the reference signal. Following the discussion above relating to claim 11,

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modifications (11.a) and/or (11.b) would yield a system, in accordance with claim 9, such that operating mode selection (and user request fulfillment) depends on a predetermined variable of a sequence in which the biometry signal agrees with the reference signal. Such a system would conform to that which is set forth in claim 13.

Citation of Relevant Prior Art

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

[1] *U.S. Patent Application Publication 2001/0036299*. Senior. Publication Date: November 2001.

Senior discloses a computer pointing device (e.g. a touchpad) combining the functionality of a fingerprint authentication system. In one disclosed embodiment, the user may tap on the touchpad with a finger(s) to simulate a mouse-clicking or double-clicking operation. Since the fingerprints are continuously captured and verified, and since double-clicking generally corresponds to some action being performed (i.e. changing of operating mode), these teachings can be seen as addressing the subject matter of Applicant's claim 11.

[2] *U.S. Patent 6,160,903*. Hamid et al. Publication Date: December 2000.

Hamid et al. disclose a user authentication system and method, wherein input biometric data, obtained from at least one biometric source, is compared to corresponding reference biometric data. Depending on this comparison the operating mode of the system (i.e. the system security level – SSL) is changed. This addresses at least some aspects of claims 7-9. Hamid et al. column 16, lines 48-67 to column 17, lines 1-7 loosely addresses at least some of the claimed subject matter of claim 11.

[3] *U.S. Patent 5,867,802*. Borza. Publication Date: February 1999.

Borza discloses a method and system for authenticating users of a vehicle, based on the comparison of input biometric data (i.e. fingerprints) to stored reference biometric data. Depending on this comparison, different operating modes are invoked – e.g. operating modes,

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limiting access to vehicle functionality, attributed to temporary users and operating modes, with extensive access to vehicle functionality, attributed to permanent users. Borza's teachings are relevant to claims 7-9.

- [4] *European Patent Application Publication EP0761514*. Taubkin, et al. Publication Date: December 1997.

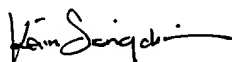
Taubkin et al. disclose a vehicle security system, wherein user authentication is based on the comparison of input biometric data (i.e. voice patterns) to stored reference biometric data. Depending on this comparison, different operating modes are invoked – e.g. “Retraining Mode”, “Valet Mode”, or “Car Jacking Mode”. Taubkin, et al.’s teachings are relevant to claims 7-9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Siangchin whose telephone number is (703)305-7569. The examiner can normally be reached on 9:00am - 5:30pm, Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Siangchin



Examiner
Art Unit 2623
ks - 06/04/2004



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